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The
Photographic Times

VOL. XXXIX DECEMBER 1907 No. 12

LEGAL PHOTOGRAPHY.

BY W. R. HUMPHRIES.

(Illustrations by the author.)

THERE is no end apparently to the practical uses to which modern photography may be put. It has had its place among the arts since the days of Daguerre; it has been a recognized form of popular amusement since the invention of the Kodak; the astronomer find it indispensable in the matter of charting the heavens and recording his discovery of new worlds or other stellar wonders; the more utilitarian engineer or builder finds it invaluable in his business and now the lawyer employs it to establish his own or destroy his opponent's claims in suits at law.

It is of its use in the last named phase I am impelled to write at this moment. For want of a better name and for sake of convenience in the matter of differentiation I will call it "legal photography."

Readers of the newspaper accounts of a recent celebrated murder case tried in one of the New York courts, will remember that photographs frequently figured, while the testimony was being taken to prove and to disprove the testimony of witnesses. In countless other cases photographs have been used to establish the nature and extent of personal injuries. Of late, however, corporations have come to recognize the value of the camera as a collector of indisputable evidence and many now have their own staff photographers under salary or retainer whose duty it is in case of wrecks or other accidents which cause delay of trains or loss of life or goods and from which suits for damages may spring, to go to the scene and establish the true condition of affairs as revealed in a series of photographs. A bridge may be washed out causing delay in the matter of merchandise, machinery, or other material which will prompt the consignors to set up a claim for damages. A photograph of the banks of the stream showing the ravages of the unduly high waters invariably proves the delay caused by an "act of God," as the legal language puts it, and renders the company free from liability.

A LITTLE TROUBLE FOR THE WRECKER CREW

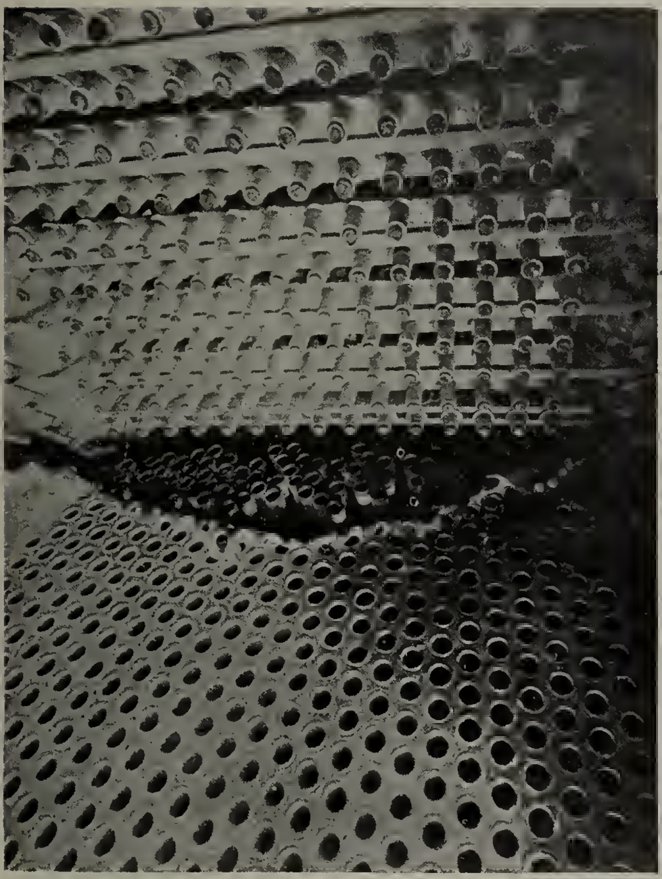
In cases of collision a photograph of the wreckage often enables a trainmaster or division superintendent to determine beyond peradventure where to place the blame.

I was recently called in my official capacity to photograph a wreck on the Galveston, Harrisburg and San Antonio road out in the West Texas desert at a point about 150 miles East of El Paso. The wreck was a most unusual one. The boiler of the locomotive had exploded causing the locomotive to leave the track while running at a high rate of speed. The cars of the train followed and were piled up in indescribable confusion. Besides the damage to merchandise several of the crew, including the engineer, were injured and claims amounting to nearly $100,000 stared the officers of the company in the face.

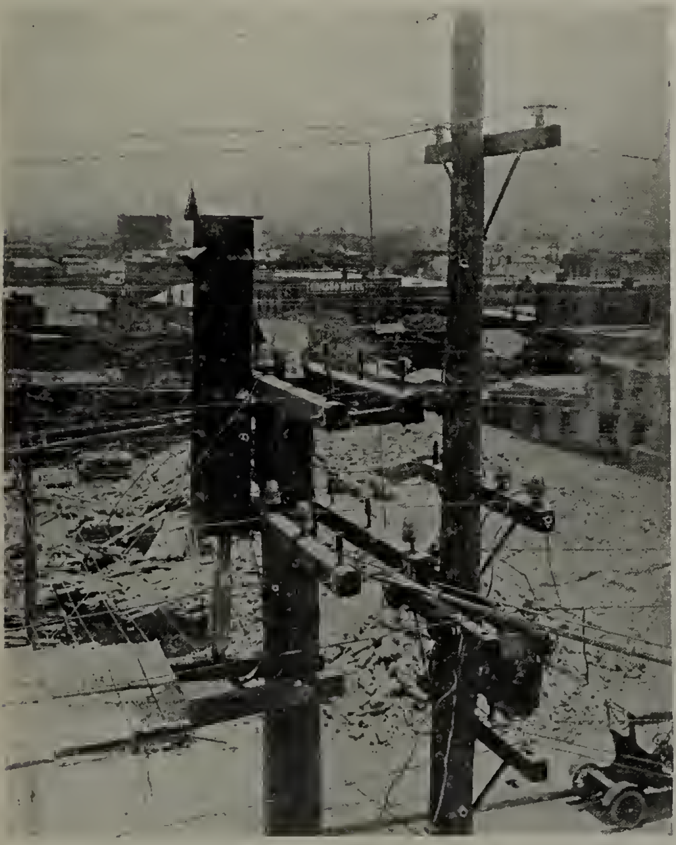
Upon reaching the scene I learned that the cause of the explosion was a mystery. My first question, "Was the boiler supplied with water?" I was told a full guage had been taken but a few miles

This photo was used as evidence in a land case. Ground supposed to be of an agricultural nature.

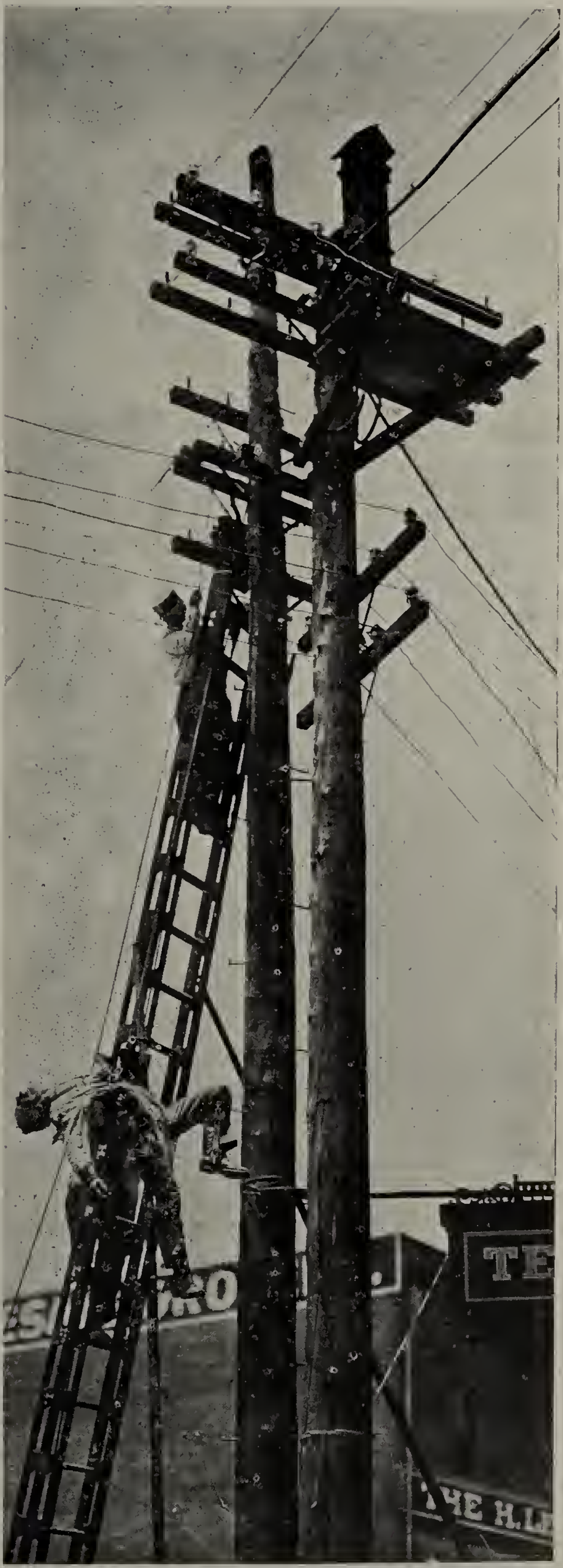
The story of a locomotive boiler explosion. Photo made at 7 A. M. during a rain storm.



A corner of the firebox, showing burned condition of the crown sheet. Daylight exposure made with wide angle lens.



Detail photo used by expert electricians to determine cause of death.



A victim of a live wire, El Paso, Texas. Firemen use Hook and Ladder to remove body.

back. That puzzled me, but I began to investigate. Though the fire-box was still hot I crawled into it dragging my camera and flashlight apparatus after me. After making several exposures I crawled out. The negatives showed conclusively that the crownsheet was terribly burned. Other negatives secured later established the fact beyond question. The engineer had taken water as he said he had, but had failed to notice that the injector was out of order and that no water was being put into the boiler. His claim for damages was immediately wiped off the slate as it was proved beyond dispute that the wreck and his own injuries were due to his own neglect.

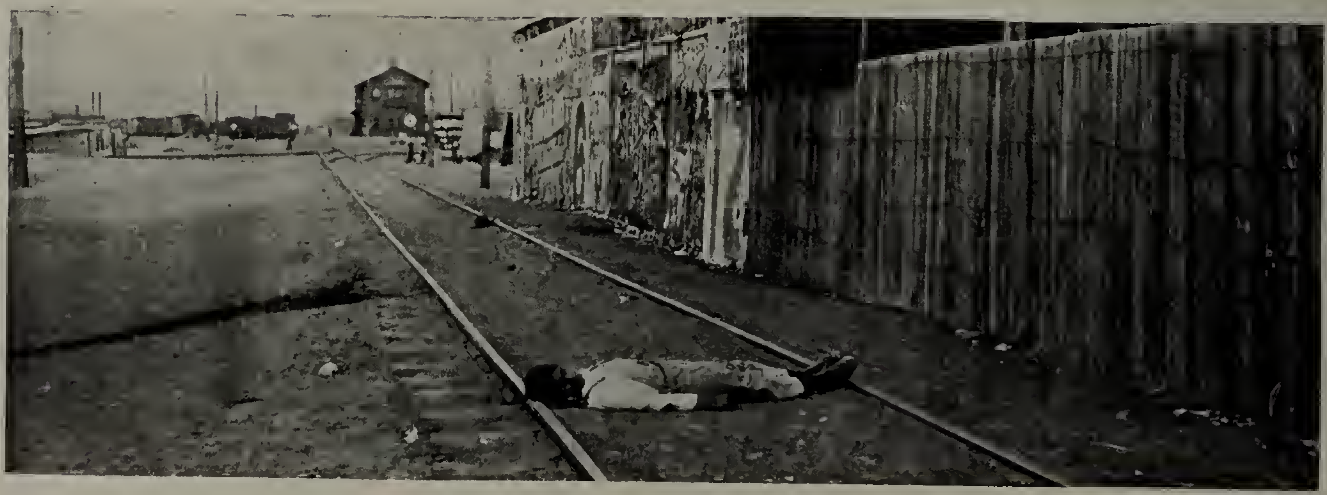
During a recent epidemic of typhoid fever in El Paso the newspapers viciously attacked the water company; charging that water from the Rio Grande river, instead of from deep wells on the mesa, was being pumped into the mains and poisoning consumers. I was asked by the water company's manager to photograph the old pumping works at the river. The photographs revealed in a manner more convincing than whole pages of cold type could have done, that the old plant was dismantled and therefore could not have been used as charged. On the other hand photographs of storage reservoirs into which the well water was being pumped showed a deplorable condition of affairs as regards cleanliness or lack of it and compelled radical reforms.

In the same crusade the dairies from which the milk supply was drawn were indiscriminately attacked. I was retained by some of the largest of them to photograph their premises to prove that the sanitary laws were being complied with. By these photographs the newspapers were compelled to withdraw their charges so far as these particular dairies were concerned and to be more careful and thorough in their attacks upon others.

Street car companies like railroad companies are always the prey of the unscrupulous and all wrecks occurring in El Paso are immediately photographed.

Of late the legal department of the city when called upon to defend a suit for damages for personal injury claimed to be the result of defective sidewalks or obstructed streets, have photographs made of the alleged defect or obstruction to be used as rebuttal evidence.

Legal photography like many other branches of the business is as yet in its infancy, but it is growing in favor.



Posing a Mexican boy to illustrate position of body, and also show that it was impossible for a train to cut off head and feet of a boy the same size as shown in the photo.

COLOR PHOTOGRAPHY.

BY E. LUMSDEN BROWN, M.P.A., EDINBURGH.

Read before the Midlothian Photographic Association, Oct. 30th, 1907.

IT is with a very poor and modest attempt I place before you to-night, a few facts which I have gathered through personal observation on the Autochrome Process of Direct Color Photography in one operation, working on the lines given to us by the process of Messrs. Lumière of Lyons.

On examining with the stereoscope any of these interesting photographs, where form, proportions, distances, and even the intervening air between the various planes are rendered with perfect accuracy, one often says, "Color only is wanting." This is a desire which can now be satisfied. Color photography has been discovered, and has been found to be practical.

To understand the new process, you must remember that all colors are but a modification of the seven colors of the spectrum, composing the white light, violet, indigo, blue, green, yellow, orange and red. Every color possesses what is called a complementary color, which, placed side by side with it, makes it appear more brilliant. For example, blue has for its complementary orange; yellow has violet; red has green. Indigo intermediary between violet and blue has for its complementary an intervening color between yellow and orange, and, as to the shades, their complementals vary to the infinite. Moreover, these seven colors can also be reduced to three primary ones, namely, blue, yellow, and red, the mixtures of which give all the colors imaginable.

For example: Blue and yellow mixed give green, blue and red mixed give violet, yellow and red mixed give orange.

All three give black, and so on, for all the other shades are only mixtures of the primary colors.

It is from these laws that every experimentalist sets to work to seize and

Eggs, all shades and colors; red and green gooseberries; red, white, and black currants; squirrel; nests; etc.
(Shown at the Royal Photographic Society in Color.)

fix upon a sensitive plate the coloration of nature. Successively Daguerre, the inventor of photography, then Edmond Becquerel, Niepce de St. Victor, and finally Poitevin made some excellent researches on that side, and had some transient results. In 1868, Charles Cros, and Louis Ducros de Hauron had simultaneously the idea of decomposing the natural colors into their fundamentals or primary ones, and established the theory of "the three color process," which is now superseded by that of the Autochrome Process.

It has been observed that a given color will keep back the rays emanating from its complementary color, and will be passed through by rays of other colors. For example:

Geraniums, etc., on black carved table. Reds, creams, etc.

If a sensitive plate is exposed under a violet screen filter, violet being the complementary of yellow, all the rays emanating from the non-yellow parts of the subject will pass through the screen, and will impress the sensitive plate of gelatine bromide of silver.

When developing, the yellow parts of the model will come out in white, and the plate will have blackened in the corresponding points of the object photographed. A negative has then been obtained of the yellow parts of the subject. Under a green screen, then under an orange one, we take two other negatives, the first of which will represent the reds, and the other the blues. In the three negatives, the white rays have passed through the screen; these negatives then require to be transformed into positives. Now we have a sensitive film colored in yellow, and we expose it to the rays of the sun under the negative of the yellows, where the colors have blackened the plate, while the yellows, as you have seen, have come out in white,

Roses and other flowers on black carved table. Reds, creams, etc.

Portrait of boy in black velvet jacket and vest, green and red tartan kilt and hose, silver buttons and ornaments.

light will be arrested by the black parts, while through the white parts it will impress the film. When fixing the positive, the unacted-on gelatine will be dissolved, and there will remain a negative, which is the picture of the yellow color. We shall proceed in a similar fashion to obtain my other positives, one on a film colored in red, the other on one colored in blue. We have thus three pictures: the first, the yellows of the model; the second, the reds; and the thirds the blues. Thus it is understood that if we have spoken of natural colors it was to make our explanations clearer, but, if these natural colors are reproduced by natural ones, shades are rendered by shades. By yellows it is understood the whole range of yellow colors.

Now, if we superpose our three pictures, their colors and shades in blending themselves to our sight will reproduce the original in its exact coloration. Most ingenious as that process was, it was too delicate and complicated to always give constant results. You will see, however, that it held the definite solution to the problem.

It is only as a reminder that I note the method, known as "Interferences," invented by Mr. Gabriel Lippmann, as also the one of Dr. Joly, of Dublin, which was not practicable. Let us come at once to the Lumière process, which will bring us the so much needed solution. It is connected with the "three color process," only it unites the three screens on our sensitive plate, reducing thus the three partial negatives to one.

WHITE CURRANTS

After long and arduous trials Messrs. Lumière have fixed their choice upon potato starch, a transparent matter, well divisible and easily colored. This must be finely pulverized, passed through a sieve, so that not one of the grains of starch is bigger than a ten-to a twelve-thousandth of a millimeter in diameter. One part is dyed green, another orange, and the third violet.

These three powders are mixed, then sprinkled on a plate coated with a pitchy and transparent preparation. A special handling is required to avoid all superposition of the grains, after which the plate is passed to the flatting machine which flattens the grains in order that there be as little space between them as possible. These spaces are closed afterwards with the aid of lampblack. Examined under a microscope, the plate has then the aspect of a sort of tricolored mosaic, resembling transparent confettis or strange stained glass windows, the lead of which is represented by the lampblack. On that mosaic is spread a layer of impermeable varnish, then a layer of gelatine bromide of silver, rendered panchromatic, i. e. equally sensitive to all colors, and the "Autochrome plate" is ready for use. It is placed in the dark slide the reverse way to an ordinary plate, so that the light can reach the sensitive film, after having gone through the colored starch grains.

On a plate a square millimeter, there are between 8,000 and 9,000 of these grains colored, as it has been said, in green, orange, and violet which constitute themselves as many screens of the same colors interposed between the model and the sensitive plate, as has been explained previously. Thanks to the microscopic dimensions of these screens, their effects are blended, thus producing upon the eye the illusion of a uniform coloration, when, in reality, we have before us an infinite number of minute green, orange, and violet plates, every one of these plates being constituted by one grain of starch.

If our instructions of the "three color process" have been well followed, it will be understood that the "Autochrome plate" once impressed, developed and fixed, will give us, not the coloration of the subject, but its complementary colors seeing it is a negative at this stage. To obtain the positive, instead of fixing our negative after the first development with a solution containing Pyrogallic acid and ammonia, the plate is passed into a solution of acid permanganate of potash, then brought into broad daylight, where a second development takes place with diamidophenol, the effect of which is to transform our negative into a positive with the real color of the model.

Take one detail, for instance, in a portrait made by me, the reproduction of the mouth in the part of the sensitive layer, situated under the green grains of the plate, the red rays, emanating from the lips have been absorbed by their complementary, and have not been able to reach and impress the silver salt. while that in the parts situated under the orange or violet grains have been able to pass through and sensitize the gelatine bromide. We have thus obtained a negative of the mouth. The first development finished, we put the negative in the acid permanganate. It will dissolve the reduced silver under the orange and violet grains, and leave untouched the unacted-on silver under the green grains. At the second development the diamidophenol blackens the unacted-on silver, which thus darkens the parts of the plate situated under the green grains. We only see the orange and green grains with thousands of microscopic points of which the intimate mixture to our eyes, give the red. So it is for other colors. We glide over the operation of intensifying, toning, etc., in order to avoid complications.

This noble discovery honors the discoverers and French science. As a whole it is a memorable date in the history of photography, notwithstanding its fertility it is marvellous.

Messrs. Lumière have placed in our hands you will see the means by which any amateur photographer of any ordinary intelligence and ability can now reproduce any color or shade whatever direct on one plate by one exposure. That is to say, that which could only be done by the "three color process," either in printing or photography, can now be accomplished in one operation by exposing one plate on the object in place of three, and, using the Lumière screen specially prepared by them, then developing, reversing, intensifying, toning, fixing and drying off the finished result.

I shall now endeavor to explain the operation as far as it lies in my power.

Red and green gooseberries, black and white currants, cheese on plates, silver prize cup I've won, raspberries, pears, apples, and chocolates on plate, grapes, etc. (Shown at the Royal Photographic Society in Color.)

Regarding exposure. This is a very important point, because the more correct the exposure is the finer the results. I therefore advise great care on that point. Unfortunately the makers give us no speed of their plate, so each one will require to be guided in a way by others, and further work it out for themselves. Take notice to watch the variation of light, that is a very important point, as the exposure is a long one. Mr. R. Child Bayley in *Photography*, gives the speed at two on Watkins meter, while another reader gives it at about fourteen on Wynne's. This goes to show that each one will need to work out his own exposure at the present time for if we take Watkin's speed of two and suppose it takes one minute to tint, F8 will require an exposure of eight minutes. Now again take Wynne's speed of fourteen, and the tint takes two minutes for the darkest tint. F8 in this instance requires only three-quarters of a minute exposure. So this cannot be correct (both metres take nearly the same time to darken). Hence I advise you to work half way between the two, as you will see at a glance one or other is far out.

Fruit study and flowers, etc.

Indoors I find requires a different calculation to outdoors due I believe to the color of the glass of our windows. If by chance, I was to be astray as regards exposure, I should much prefer under to over exposure while for over-exposure the weaker the color, while with under exposure the denser but truer color up to a certain point.

A certain photographic editor, who is not too enthusiastic over this process, infers, that the true artist has no control over the color (at least I understand him to say), but this is not correct, for the more you overexpose, the poorer the color.

Regarding development. Well, really there is not much to say further than that the more care and method put into the whole process from the developing to the drying off, the better the result. Do not forget cleanliness and attention to details all the way through if you wish to avoid failure. It is necessary to have a clock by your side, for all operations must be timed. These details are given with each box of plates, also all the formulæ which we can make up, and are much cheaper than buying the made-up set; Therefore I need not detail them here.

In drawing to a close, I would mention and emphasize two points which have particularly struck me in this, the latest in photography: First, its fidelity of coloration; and secondly, that we have no new process to learn, simply requiring to substitute new plates for the ordinary ones, with a few changes in the procedure of development, etc.

It is regretted at present, that, so far, no results have been committed to paper, only on glass. We, however, understand, that at the present moment, there is a paper in course of preparation, which, when finished, will enable one even to extend results to paper.

Thanking you for your indulgence and attention to my rambling remarks, and hoping that I may have convinced some of you of the results attainable by this new and interesting process, and, that ere long, we may be working hand in hand in further forwarding this process, and thus opening out new developments in this interesting subject to the public at large.

MOTIVE AND SENTIMENT.

BY E. O. HOPPE.

THE budding young photographer is, as a rule, not much puzzled about *what* to photograph; the least opportunity is sufficient to see the shutter in motion without any special thought or idea. First the objects of the nearer surroundings will fall ready victims to the camera, and when his home, a group of friends in the garden, a family gathering and such like subjects have been duly immortalized, the hopeful disciple of the camera, turns further afield to find some new work.

A curious big tree, a high mountain or an old house arouse his photographic desire. A sort of mania befalls him to take a record of every curiosity he comes across and the great majority of amateurs do not get further than this primitive stage.

Having reached this stage from which hardly anybody escapes, a great many give up the hobby altogether, whereas others—and these are in the minority—evince a feeling for something better and higher than mere recording. A desire to find the picturesque and characteristic arises; in fact, the photographer begins to look for a *motive*.

This word is used so often and the meaning is so well explained in photographic textbooks and literature, that there seems to me to be hardly a necessity for any further definition. Suffice it to say, that the interest a picture arouses is at the same time its motive.

If we look around in Nature it is quite possible, that, if we turn our camera in every direction along the horizon and make one exposure after the other there is in the whole panorama which we obtain no motive whatsoever; and yet, from the same standpoint we might find, with careful selection, a motive, which is lost in the general view.

If we now have found, that the characteristic property of a motive is the arousing of a certain amount of interest we have not by any means exhausted the conception of the word, as a motive need not necessarily be an *object,* but may be expressed by a *thought.*

The finding of a suitable motive for photographic work is a rather difficult matter and has to be learned. Very often, the eye will see something picturesque and interesting, worthy to be photographed and the apparatus is put up. The picture on the ground glass gives us the whole charm of the original, and yet the finished picture does not convey to us any idea of the motive, which led to the exposure. It is a long way from the finding of a motive to its translation into a photographic picture; and under some circumstances it may even be utterly impossible. As a rule this is the case, if the motive lies in the coloring; a motive, which relies on the charm of the beautiful color-tints of the atmosphere, for example, will always be lost through translation into black and white.

Every picture should contain a motive—but *one* motive only. Very often one sees a picture, which contains two or, in some cases, even three motives, through which the interest is divided and the harmony of the whole destroyed. Such results are very common and no greater mistake could be made.

But the motive alone is not sufficient to give an artistic effect to a photogram and the best theme can be made use of in the most unhappy manner.

THE VISITOR *By E. O. Hoppe*

A little alteration of the point of view and especially later on the trimming of the picture may have a decided influence on the final result.

A fault one sees very often, is that the motive is brought right into the middle of the print. A very unpleasant symmetry is obtained thereby and the centre absorbs all the interest. On the other hand, a good motive demands, that the whole interest is kept in the picture and is not conveyed by its arrangement of composition to an imaginary point outside.

Together with the motive always goes sentiment.

Under sentiment we understand the emotion, which the view of a landscape or a certain effect in Nature create in us.

People are sensitive to these emotions in different degrees, and no two persons affected by the same sentiment, feel it alike. But as the aim of a work of art is to lift us out of our every-day feelings, the picture must contain, and give us something of what we call the sentiment of Nature.

The term sentiment can be expressed in two ways. We have for instance a *serious,* a *heroic* or *happy* sentiment, or, on the other hand the sentiment of *morning, twilight, evening, winter,* etc.

When looking at a landscape, a certain distinct feeling may come over us. The lighting, the form and the general aspect will have a certain influence on us, which may easily be put into words. The falling of the leaves in autumn, the raging

MEMENTO MORI *By E. O. Hoppe*

storm over the heath and the heavy clouds hanging over the distant mountains, will each arouse distinct different emotions in us, which we should also feel by looking at a picture, in which they are represented.

It is very difficult to express appropriately the first group of sentiment in photographic pictures as they are aroused not only through the lighting and form, but chiefly by the coloring. A picture in monochrome will therefore very seldom give us these moods. Far easier is it to represent *morning* and *evening* or *autumn* and *spring*. A little knowledge of the characteristic points of these sentiments will enable us to give a good idea of their peculiarities, and there are a great many photographic pictures which express these sentiments in all their beauty and charm.

There is no doubt, that some of these effects are practically suitable for representation by photography. Evening is one of them and again and again you will see evening effects amongst photographic work. Some have gone so far as to use certain methods of faking to produce them, but this is not to be recommended, because the majority may be recognized at once by their being altogether untrue to Nature.

If an attempt is made to introduce sentiment into a picture it is absolutely necessary that the technique has been thoroughly mastered; for what we call sentiment is based on a certain and distinct relation of the different tone-values to each other. Therefore if a true representation of a sentiment is to be obtained, it is necessary to perceive its characteristic points and to introduce them into the picture.

All that has and might be said on this subject will, of course, only be understood by those, who themselves have a fine feeling for Nature and can appreciate her different moods.

Very useful hints may be obtained by studying the masterpieces of landscape painting. This study, and especially the study of Nature herself will always give us new and valuable ideas for photographic work and will sometimes lead us to perceive motives and sentiments which we should probably not have found otherwise.

Of course, we cannot expect that everybody feels the same emotion as ourselves.

The picturesque effect of picture can only be appreciated by him, who himself has seen Nature in the particular mood represented.

This is the reason why we succeed so well with sentiment of our own particular native country, and that pictures from unknown regions, however beautiful and grand they may be, do not arouse the same amount of interest in us as our own homely surroundings, however small and simple they are.

Another point to be learned from this is that the more simple and modest our *motive* is the sooner shall we succeed in bringing the *sentiment* into it.

These notes are' based on the excellent book by Dr. Miethe, published by Messrs. Knapp of Halle à Stein, Germany.

JAPANESE STUDY *By E. O. Hoppe*

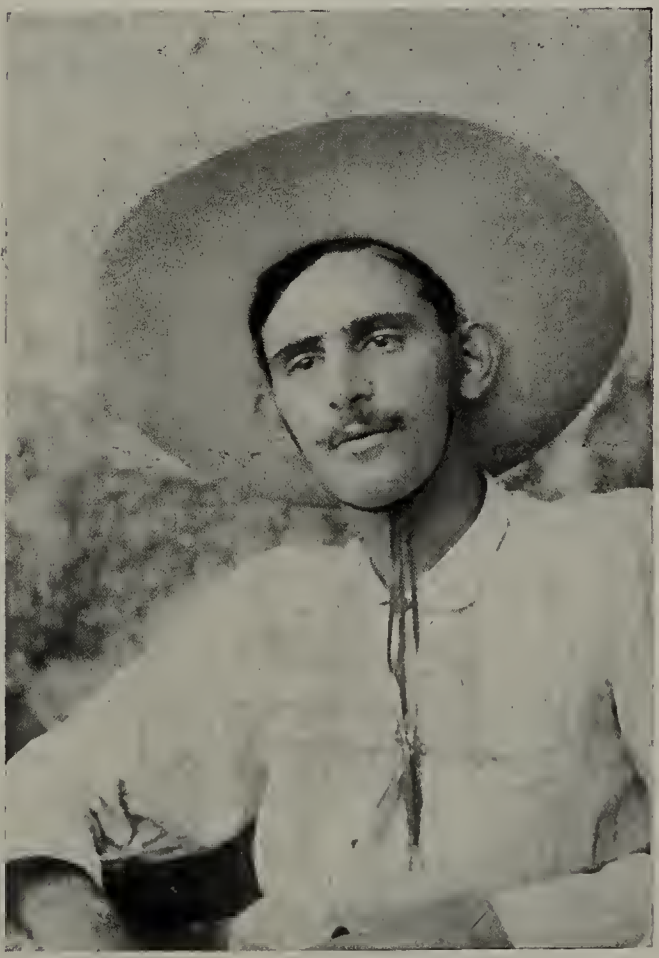
THE MONTHLY COMPETITION.

WE regret exceedingly to state that we did not receive for this competition a sufficient number of prints within our standards to warrant awards, so we are holding the entries to be combined with those sent in this month. We presume the lack of entries is due to the fact that the summer's work has not been entirely completed, and that many of our readers are holding their entries back until all the summer's negatives have been proofed and the best possible prints made and selected. We are very pleased to note that our offer to criticise the entries has met with an enthusiastic response as it demonstrates the willingness of our readers to profit by their errors and to permit of other readers securing a like advantage.

The great trouble with the average amateur photograph is that it is simply a photograph and nothing more, that it lacks a motif, a reason for being of sufficient importance, that other requisites being present, entitle it to be called a picture. The technical work may be ever so good, and the subject perhaps possess a personal interest to the maker, yet the result may be anything but pictorial. It is also difficult to make the budding pictorialist realize the deadly dullness of the commonplace. Take the average landscape, trees, sky and water —usually portrayed near the middle of the day—no shadows, everything sharp, no mystery, nothing left to the imagination. Such a picture may raise the comment "a pretty thing," but do you turn to it again and again, each time finding some new beauty of reality or of suggestion—no, you do not, and that is one of the reasons prize winners are so few and far between.

This is not intended to discourage you, but to make you think, study and to devise the original. Be different even if your first attempts at being original result in caricature. If you have the right stuff in you, you will soon learn to decide and to produce the good stuff that will be not only a lasting pleasure to yourself, but to all beholders.

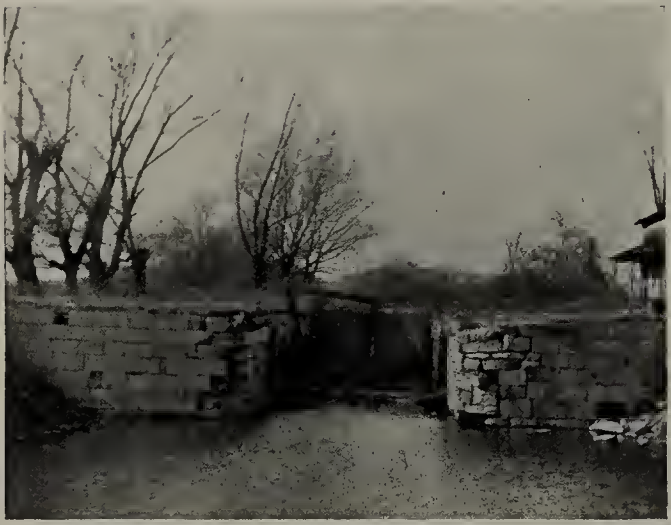
Among the pictures we have been asked to criticise this month is one entitled: "The Cowboy," by D. F. P. Now frankly isn't it just a picture of a big hat, can you see anything else when you first look at this photograph? Does the subject



THE COWBOY *By D. F. P.*

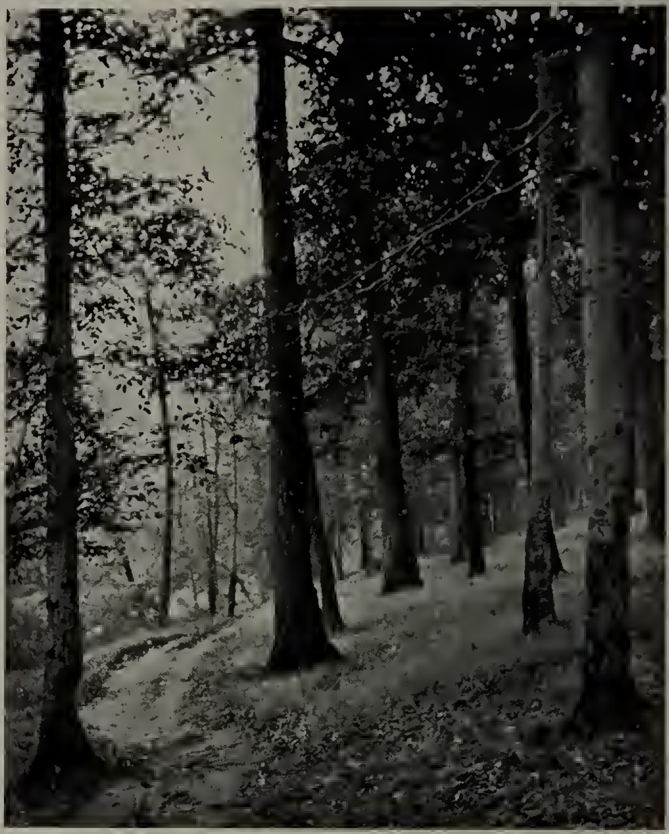
in anyway portray the breeze and hustle of the West, might he not be anything else as well as a Cowboy?

Make your subject live up to the title—or change the title. Take this same man under the same hat, let him be coiling his "rope," adjusting his spurs, or mounting his broncho—doing *something* in keeping with his title *then* your photograph has some reason for being and for having a title. As a portrait of Mr. —— it is much better, we can stand for that, only if it were a portrait, a much better view of his face could have been made profile or three-quarters view, bringing out the strength of a good nose, and chin, and subduing the two prominent ears. Here is another photograph, "The Old Canal Lock," by W. J. S. A good record of fact and nothing more, there is no composition and no interest, you have no way of getting either into or out of the picture, no foreground, all the strong lines horizontal, and no vanishing point. All you can do is to accept that it accurately portrays the old lock and let it go at that.



THE OLD CANAL LOCK *By W. J. S.*

"A Woodland Path," by J. H. T. is nearer the mark, though by no means without faults. Just try placing your hand so as to cover the tree to the extreme left and note how much more restful the picture becomes. While that tree is there, your eye is continually glancing to the left of it, instead of wandering into the enticing woods by means of the gently curving path just to the right. Toning down the sky in the upper portion of the picture would also improve the distance.



A WOODLAND PATH *By J. H. .T.*

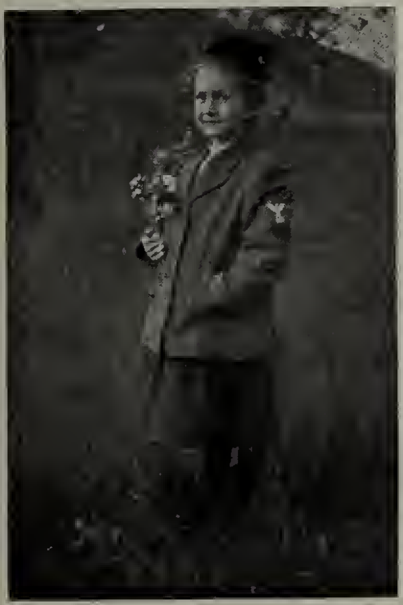
THE LONG LANE *By R. I. D.*

"The Long Lane," by R. I. D., also desires criticism. If you *can* succeed in getting past the white figure in the center foreground, you may discover the long lane; just note how difficult it is to get away from this figure, it is like a stone wall. If it had been seated at the left of the picture to balance the dark mass of trees on the right it would have helped the composition greatly and added interest to the picture. It would have been better still to have moved the camera more to the right so as to cut out so much of the road in the foreground, and also to have gotten rid of the distracting light just over the fence below the large tree.

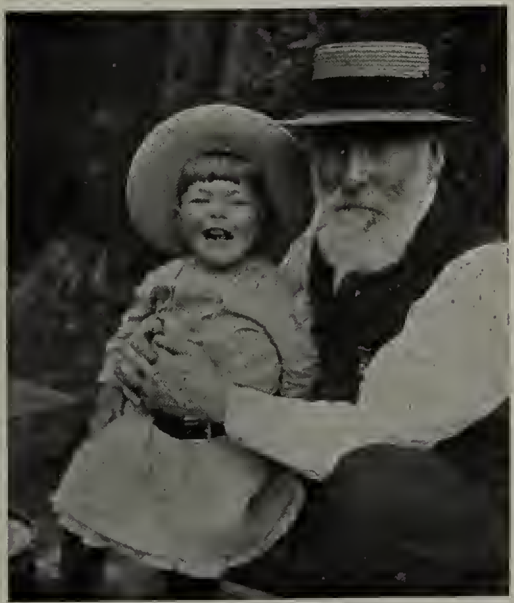
Here are three little portraits by A. M. M. "The Lady with Book" is the best, the hands are exceptionally well rendered, and the flesh texture is good; the light on the supporting arm is too strong, it should be toned down to a tone lower than the face, as the face, the principal point of interest, should contain the highest light. "Springtime," Here is a nice little lassie in a Scotch cap, standing stiffly watching the photographer for the word that it is all over. She would have made a dainty little picture, *picking* these flowers. Get action into your pictures of people, let them be doing something, or thinking of something other than being photographed. "Grandpa's Boy" is a good example of an unimproved opportunity. Why couldn't Grandpa have been telling Sonny a story, or doing most anything to suggest a picture—a reason for it.

The other entries desiring criticism do not differ sufficiently to warrant space. We would like to find room to criticise all entries requesting same and we may in the beginning of the year establish a department for this special purpose.

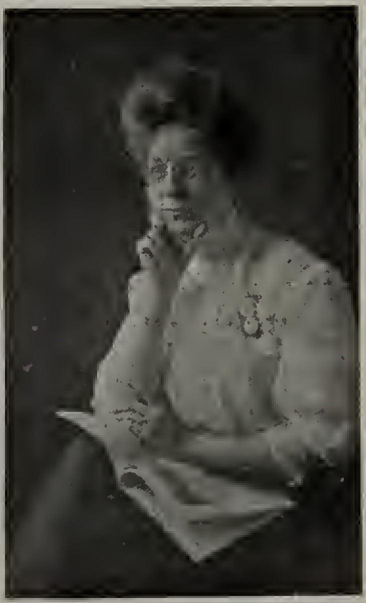
Some of you may feel your efforts too severely criticised, but take your medicine and come up smiling. The writer of these lines has been through the mill himself, and has listened to criticisms of his own work with ears burning and eyes smarting—it hurt but the effect was beneficial.



SPRINGTIME



GRANDPA'S BOY



THE LADY WITH BOOK

AN ADJUSTABLE ENLARGING EASEL.

BY N. R. EWAN.

THE makeshift apparatus often described in photographic magazines which lead the amateur to imagine that an old shawl, a soap box and a few carpet tacks are the most elaborate articles needed to get up a *simple* outfit for bromide enlargements will find a few indispensable adjustments quite necessary to anything like serious work.

That most of these adjustments *can be* made by manipulating a few extra props, adding a book or two to a questionable underpinning and like dodging, (leaving out the question of a misplaced elbow knocking to pieces the whole outfit when everything is ready for the exposure) is a possible fact. The amateur, however, needs but a trial or two with "simplicity" of this kind to greatly diminish his enthusiasm for enlargements.

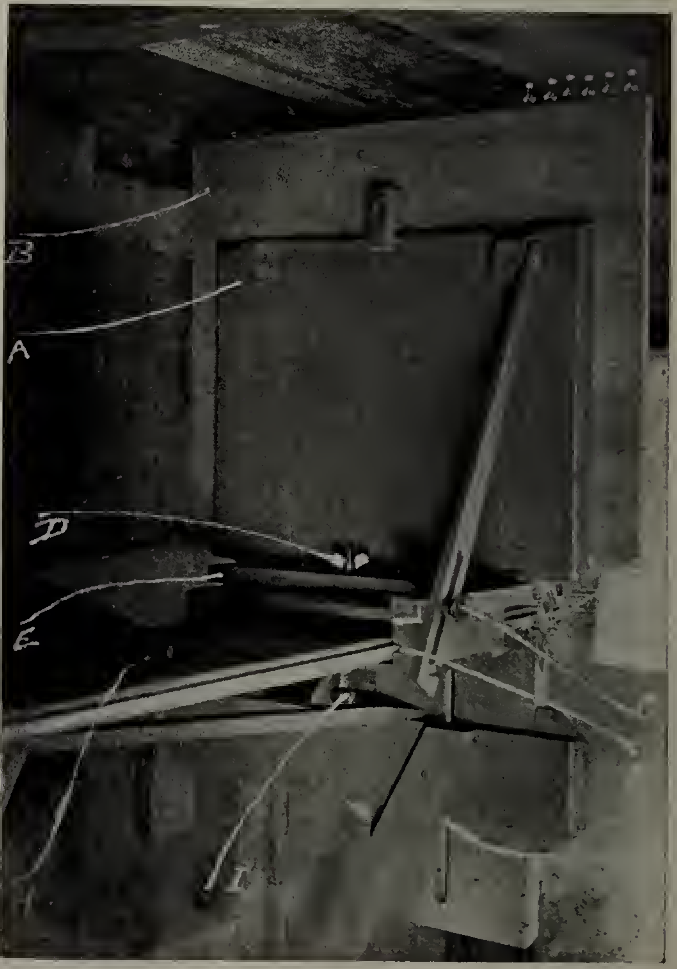
The easel shown in this article can be made by an amateur carpenter and of inexpensive materials, but carpet tacks and *"any old thing,"* is not of its makeup. Every possible adjustment for correcting faulty lines in defective negatives is possible and a feature particularly advantageous is its absolute rigidity.

By reference to engraving, which shows a rear view, A is the regular board hinged at bottom for enlargements up to 11 x 14. The supplementary board B, is only brought into use when work up to 16 x 20 is in order and is instantly clamped to A by turn buttons shown.

At C is the binding screw for upright swing. The thumb nut D secures *both* the horizontal swing and sidewise sliding adjustment, through slot cut in base The focusing is done by the whole sliding on the 7½ matched board H. The ploughed and grooved edges of this board form a carriage way in which are fitted opposite sections cut from same board. These, when slightly sandpapered down form a very smooth working surface and allow delicate focusing. The screw I fastens the whole at point desired.

The raise and lower adjustment G is retained in same way and clamped by screw in front (not shown). A hinge at J allows necessary movement.

I might add that board A has a ledge on lower edge to retain printing frames on as I find these a very handy means of holding bromide paper when using



regular sizes suitable for such.

White card board is a very good medium to focus on and if fastened to easel should be very slightly damp when attached thus avoiding future "buckling."

I have purposely refrained from giving many dimensions because available space, focus of lens and other special requirements call for variations peculiarly different.

RESTORING NEGATIVES OF UNEVEN DENSITY DUE TO NON-UNIFORM DRYING.

BY PAUL L. ANDERSON.

I RECENTLY made two negatives on double coated non-halation plates, and, by reason of a sudden change in the weather while the plates were drying, portions of each negatives showed much greater density than the remainder, making them totally unfit to print from. Since circumstances prevented my repeating the exposure, it was especially desirable to save the negatives, and local reduction, the only method I had ever heard recommended, seemed rather dangerous, so a means was sought which would affect the entire negative, and afford more desirable results.

Prolonged soaking in water and careful drying had no effect, nor did soaking in an acid-alum hypo bath, followed by washing and drying, make any visible difference.

The next method tried was rehalogenization, as described in the Photographic Times of April, 1907, redevelopment being effected by means of a dilute pyro-soda solution, and the results were all that could be desired. The negatives, viewed by transmitted light, show perfectly uniform density, and prints from them are perfect.

Both negatives were portraits, in one case the line of demarcation lying across perfectly uniform density, and prints the sitter's cheek, in the other across a prominent portion of a white dress, so that any variation would be readily visible.

I would caution anyone trying this method against removing the plates from the developer too soon, as the action seems to be uneven in the earlier stages.

Editorial Notes

Color photography has the center of the stage at present due to the introduction of the Lumière Autochrome plate. The results produced are truly marvelous, and color photography, in so far as producing a positive on glass is no longer a myth but an assured fact. With this much accomplished, it does not seem far to the invention of a process to produce duplicates in color from the original color negative.

The making of an Autochrome transparency is not an intricate process every step is clearly outlined in the instructions furnished, but each step in the process must be exact, the "take a chance" photographer will not succeed with Autochrome. The color values are remarkable in their correctness, especially in rendering blacks and grays. In some instances, the colors will appear to be untrue, but if compared with the original, under circumstances identical with the time the picture was made, it will be found that the apparently false color is correct, and due to the reflection of some colored object upon the one appearing false. For instance, a white house situated amongst heavy green foliage will show a greenish tinge apparently false, but absolutely true, due to reflection.

The reproduction of polished metals seems a bit faulty in color, but this may be due to the reflecting of other colors in a high degree. At all events, color photography is an accomplished fact, and as soon as the plates are commercially obtainable here we may look for a tremendous amount of interest and enthusiasm in the making of color transparencies.

* * *

In sending pictures to the various Salons and photographic exhibitions, the novice should carefully consider the following, as it will have much to do with the acceptance or rejection of his efforts.

In the first place, do not send any pictures that you deem only passably good. If you do not feel competent to judge your own efforts, consult some disinterested authority, and insist on an impartial and severe criticism. If your selections pass his judgment, the next things to consider are suitable printing mediums, mounting, framing and titles.

In most instances a matte surface paper is preferable, and the use of warm tones such as redeveloped Velox, or the various sepia platinums and kindred papers. For snow scenes a black and white paper is of course *sine qua non* and for marines, either black and white, or green. If you employ carbon, or Ozobrome as a medium, the red chalk is sometimes effective in sketchy portraits or figure studies, but as a general rule avoid all colors except a good black or rich sepia.

If you intend to exhibit your pictures matted, be very careful in the selection of your mounts, avoid all bizarre effects in color or arrangement, and be sure that the color or tone of your mount does not degrade the tonal qualities of the picture. In other words, do not use red and green mounts for your sepia, or any absolute black or white mounts for your black and white prints. Select rather, the softer tints of brown for sepias, and slightly tinted grays, etc. for your blacks and whites. It is true that you will often see accepted entries mounted quite at variance with the above suggestions—but you will find they are the work of the skilled and seasoned exhibitor, who knows exactly just how far he may depart from the conventional and still keep within the bound of good taste. Many a good picture has been spoiled by careless mounting and inartistic framing. Having selected proper mounting, be sure that your print is neatly mounted thereon, have all edged true, and placed square on the mount so that the edges will be parallel with the sides of the frame—also be careful that no paste smears or smudges show on the mount—be neat.

Under no circumstances place the title or your name directly on the print, or on the mount either, unless it be neatly and artistically done. Select your frames carefully, avoid by all means gilt and other gaudily colored abominations. Likewise, avoid all ginger bread effects in fancy mouldings and beadings. Subordinate always the frame to the print, do not let it overshadow the picture either in color or size. Place on the back your full name and address, title of print and price if for sale.

To insure safe return send your pictures in a good strong box, with the return address on the inside of the cover—and if you would win the everlasting gratitude of the exhibition officials, have the cover *screw* on, so it may be easily removed and replaced.

MONTHLY FOREIGN DIGEST.

TRANSLATED BY HENRY F. RAESS.

Contrasty Prints from Flat Negatives.

Silver chromate has been found to give greater contrast than any other silver compound. Apparently but one firm is making a paper of this kind, Ferd. Hrdliczka of Vienna, Austria, it is called "Rembrandt." It can easily be made from gelatine or collodion printing out paper by converting the free silver nitrate into chromate by placing the paper for Contrasty Prints from Flat Negatives. half a minute in a solution of potassium bichromate 1-100. The paper is then hung up to dry. A stronger solution or a longer soaking must be avoided, as otherwise, the paper becomes too insensitive. The solution colors the paper yellow, but this disappears in the fixing bath. It is necessary to print dark as the prints lighten very much on fixing.—*Photographische Welt,* Vol. 21, No. 7, July, '07.

Action of Oil Paint on Plates.

Louis Morin preparing for his summer vacation found the numbers on the metal septums or carriers of his magazine required renewing. He used oil colors, after painting he placed the carriers in sunlight for a considerable length of time. On development after the plates had been in the carriers for one month, he found in many cases that the painted numbers appeared on his plates. Thereupon he removed the painted numbers and replaced them by those printed on paper which were glued in place, the trouble then ceased.—*Photographische Korrespondenz,* May '07.

A NOTE ON OBSERVATION.

WITH SOME PRACTICAL HINTS ON ITS CULTIVATION.

THE generality of mankind are notoriously lacking in the matter of observation. Multitudes of people look out upon the outside world, but few really observe closely the natural changes or the innumerable incidents daily presented to their vie.w Not the least of the pleasures derived from the pursuit of photography is that delightful increase of interest in the natural beauties of the countryside and the picturesque features of towns and buildings. It is not that these things in themselves have changed for the better, but that the photographer regards them in a new light. He looks for possible pictures, and he finds landscape and village, woodlands and the busy avenues of commerce teeming with subjects of beauty and interest. This is good; the effect upon the individual cannot fail to be beneficial, for it teaches him to look beneath the surface of things and discover the true harmony that lies beneath.

But the photographic reproduction of these things is another matter. If forms and colors, postures and expressions affected the photographic plate in the same degree as they affect the brain, photography would be simplified. But the amateur is not long in discovering that numerous pitfalls lie betwen him and the goal of pictorial expression by means of Photography. The vivid glory of a golden sunset, the russet splendor of autumn, and the brilliance of flower spangled meadows, somehow contrive to lose all their life and reality when translated to paper by means of the photographic plate.

We know in a great measure how this is, for the appeal of many of nature's most charming effects depends almost wholly upon color, atmosphere, or a transient nameless something that eludes description. We know that colors which appear vivid to the eye may be weak in their effect upon the photographic plate; and we know that such things as small stops, over exposure, etc., conspire to destroy the sense of atmosphere and reality which should appear in our work.

It is almost impossible to get a theoretically perfect negative; that is to say, a negative which has received exactly the correct exposure and development, and in which the gradations and values exactly reproduce the original. Hence most pictorial workers are reduced, to faking in greater or less degree, endeavoring to work the negative in such a way that it shall give a print having a close monochrome relation to the original subject.

And it is in this business of faking that the observant person triumphs over the less observant. For instance, mist effects are very popular, and if the negative does not show sufficient, the worker endeavors to introduce the desired effect. A skilful worker may produce, say a landscape showing just the tops of distant trees and a hazy distance in which one is scarcely able to discern anything. Some folk would call such a picture a "fuzzytype," but if they would go out on a misty day and take careful note, they would probably be surprised to find that they could not see any more than was visible in the photograph.

Again, the introduction of high lights will often relieve an otherwise flat print; but these high lights should be introduced accurately. As an exaggerated case, we may take the putting in of high lights presumably cast by a sun to the left of the composition, when other indications point to the sun having been to the right. A false light introduced is not only banal in itself, but it destroys the whole scheme of tones in the picture, and it must either be removed, or the rest worked up to it.

The necessity for observation is nowhere more apparent than in the domain of portraiture. The professional, to be really successful in this branch, needs to be something of a student of human nature and a close observer of people generally. And the amateur portraitist should endeavor to portray a characteristic expression of his sitter. The tedium and anxiety of posing not infrequently destroy the natural expression of the sitter, and the photographer should endeavor to remember the natural expression as a guide to him when retouching. Moreover, your sitter may not be feeling quite up to the mark, and tell-tale lines may be present under the eyes. A close observer will see at once that thse marks are merely incidental, arising from indisposition, and not a permanent characteristic of the features like certain other marks generally regarded as indications of character.

As a practical exercise, the amateur photographer will find it good to make a mental note of effects of light and shade, and the various characteristics of subjects he thinks of taking; and then let him write out in a book a minute description of the qualities he has observed. If possible a subject should be chosen so that the written description may be compared with the actual subject under precisely the same conditions; the observer will no doubt be surprised to find how much he has forgotten. Another exercise often recommended to art-students, and practised by some of our greatest painters (notably J. M. W. Turner), is to make a rough outline sketch of any pleasing arrangement of light and shade, and amplify it by written remarks on the surface of the sketch. The act of analyzing the scene in this way will quicken the perception for these small differences and subtleties which might otherwise be unobserved, but which are often the basis of a fine effect.—*Focus.*

OZOBROMES FROM P. O. P. PRINTS.

BY ERNEST ELDER.

ALL the published articles dealing with the Ozobrome process which I have read have been limited in their reference to the use of bromide or gaslight papers as the means of producing Ozobrome prints. It does not appear to be generally known that this limitation is unnecessary, and that P.O.P. prints can be used to give equally satisfactory results. Although for enlargements bromide paper will hold its own, it seems to me that for smaller prints P.O.P. offers many advantages. Not only is the image visible during the process of printing, but control by means of shading and sunning down and combination printing are easily carried out to obtain any desired effect.

Enough has already been written about the Ozobrome process to render unnecessary further reference to the ordinary method of procedure; and I will confine myself in this article, therefore, to such points as are necessary in dealing with P.O.P.

Ozobromes may be obtained both by the "transfer" and "non-transfer" methods from P.O.P. prints:

(1.) Unfixed.

(2.) Fixed.

(3.) Unfixed (gelatine) self-toning P.O.P.

In the first case, that of the unfixed print, the P.O.P. print after removal from the printing frame is thoroughly washed to remove the free silver, and then, after being hardened by immersion for five minutes in ten per cent. formaline, is washed for fifteen minutes. There is not much advantage to be gained by using unfixed prints for the transfer method, because in such a case it is not possible to redevelop the bleached image to its original state. But it is preferable to use unfixed prints for the non-transfer method, and to clear away the partly bleached image with Farmer's reducer.

Prints to be fixed should be printed deeply, fixed in a hardening and fixing bath composed of water 20 ounces, hypo 3 ounces, potassium metabisulphite ¼ ounce, chrome alum ¼ ounce, and then thoroughly washed to remove all the hypo. These fixed prints are equally suitable for either the transfer or non-transfer method. If used for the latter method, the partly bleached image may be removed by Farmer's reducer, or it may be redeveloped and toned. Rodinal and metol-hydrokinone are very suitable developers for the purpose. After fifteen minutes' washing the print may be toned in a bath composed of twenty per cent. solution of sodium sulphide 3 drops, water 1 ounce. In the case of weak Ozobromes, this toning of the underlying image greatly adds to the richness of the finished print.

If the fixed print is to be used for the transfer method, it is only necessary to wash it for fifteen minutes after separation from the Ozobrome tissue, and, after redevelopment, it is again ready for making another Ozobrome. The bleached image redevelops up to, but not beyond, its original strength. It may therefore be left in the developer without fear of its being over-developed.

Prints on gelatine self-toning papers that have not been fixed may be treated exactly as described above for the treatment of unfixed prints on ordinary P.O.P. Fixed prints on self-toning papers are no use, owing to the toning action of the gold contained in them. Collodion papers are equally of no use.

The statement has been made above that it is not possible to redevelop an unfixed print; perhaps I ought to qualify this by saying that so far I have failed to do so myself. At the same time, I have an idea that this should be possible, by using one of the developers recomended for the development of P.O.P. I only tried one, and this was not successful. Perhaps someone else trying this process may be more successful; if so, the use of this method will be greatly increased, owing to the saving of time effected by obviating the long washing necessary after fixation.—*Photography.*

Notes, News and Extracts

THE FOURTH AMERICAN SALON.—After a successful exhibit at Pittsburg, will now visit other cities. The itinerary has not been fully made up, but other cities at which the exhibit will be shown are, Toledo, O., Indianapolis, Ind., St. Louis, Mo., Chicago. Ill., Milwaukee, Wis., and Wilkesbarre, Pa. Brooklyn, Cleveland, O., and Worcester, Mass. will in all probability also hold the Salon.

* * *

LUMIERE VISITS BOSTON.—New Color Photographs shown at dinner in honor of the great Frenchman.

Boston has had its first peep at the new photographs in color. The presence in Boston of Antoine Lumière, the head of the family of Frenchmen who have made this new photography possible, was seized by Wilfred A. French for the presentation of the great foreigner to representative Boston scientific men and photographers. A dinner complimentary to Lumière was given at the Brunswick at which the new autochromes were shown for the first time in this city. This process, it should be understood, is the realization of true color photography. It has recently been described in the *Transcript*, and the result is that by a single exposure of the special plate in the ordinary camera a colored photograph on glass is obtained.—*Boston Transcript.*

* * *

AN EXHIBITION OF PHOTOGRAPHS BY THE MEMBERS OF THE PHOTO-SECESSION will be held at the little galleries of the Photo-Secession, 291 Fifth avenue (between Thirtieth and Thirty-first streets), New York, opening on November 18th and closing December 30th. The galleries are open from 10 A. M. till 6 P. M. daily, Sundays excepted.

Note.—Between 10 and 12 A. M. and 2 and 3.30 P. M. autochrome color photographs by members of the Photo-Secession will be shown.

* * *

THE NEXT CONVENTION of the Photographers' Association of Illinois will be held in Adam Hall, Joliet, Illinois, May 5th, 6th and 7th, 1908. Further information may be obtained from H. W. Harper, Secretary, Joliet, Ill.

* * *

CANANEA, SONORA, MEXICO, OCT. 23, 1907.—In the PHOTOGRAPHIC TIMES for October and in other places, I have read instructions for printing photographic post cards, but I have never seen mentioned a little contrivance that I use.

After cutting the opening in the mask, I lay a card, (a printed one is all right) on the mask as I should an unexposed card and weight it so it will not move. Then I take a strip a quarter of an inch wide, cut from the long side of a spoiled card, and paste it to the mask close against the card that is lying on it, being careful that the ends are flush. Whether the mask is pasted to the negative or not, it is easy to place a card against this strip, even in dim light; and it is a satisfaction to know that the picture will appear systematically placed on every card.

As I have never known anyone to tell what is the easiest way to cut a rectangular mask, perhaps every one does it the way I do; which is, to cut from pasteboard with a print-trimmer, a rectangular mask of the right size, lay it on the black paper on a piece of glass, and cut around it with a sharp knife.

G. W. MACK.

* * *

MULTIPLE MOUNTING. — When multiple mounting some difficulty is occasionally experienced when narrow tints are required either round the print or round each other. In this, as in many other cases, it pays to be apparently extravagant. Instead of cutting the paper to the exact size, and then carefully mounting the print, it is better to cut rather larger than the size required, mount the print, and then trim down to the required depth of tint. When adopting this method, it is not so necessary to be exact about the position of the print, and when the print is mounted it is an easy matter to trim by means of a rule or straight-edge. The same method can be adopted when superimposing the various tints.

Making Paper Transparent.—The following mixture is recommended by Herr Mai for making paper negatives transparent:

Turpentine	60 c.c.s.
Powdered resin	20 g.
Gum elemi	20 g.
Best paraffin wax	7 g.

Place in a clean enamel saucepan and heat with constant stirring till it begins to boil, and then remove from the fire and allow to cool down a little, and add

Turpentine .... 50-60 c.c.s.

Then transfer to a wide-mouthed well-corked bottle. To apply to a negative place the latter face downwards on a sheet of clean blotting paper, and paint the back thinly by means of a flat brush with the above. Give three coats, allowing to dry in between each.

An easier made medium is:

Canada balsam	10 g.
Turpentine	50 c.c.s.
Paraffin wax	5 g.

Here the wax must be melted, the balsam added, and then the turpentine. In both cases care should be taken in heating, as the vapor of turpentine is very inflammable.

* * *

Packing Plates.—The question of packing plates after exposure is one upon which various opinions are held, and many prefer to pack them film to film with nothing in between. It is stated, however, in one of the German photographic journals that this is not the best way, for it is usual for the emulsion to be coated on the hollow side of the glass, when two plates are placed film to film there is always an air space in between, and the constant change of air gives every opportunity for injurious germs, etc., to find entrance. If, on the other hand, they are packed glass to film, then they fit tight, and the plates will keep indefinitely. Probably this statement refers to German glass, as there are few English plates which show any "hollow side."

* * *

Dry Stripping.—In a recent number of the *Photo Revue,* M. Maindron suggests the following method of dry stripping a negative film, which may present some advantages, but surely it is an open question whether the gelatine will not retain some of the potash salt, which may lead to subsequent troubles, as it is very hygroscopic. Soak the negative in the following solution:

Formaline	150 c.c.s.
Potassium carbonate	50 g.
Water to	1,000 c.c.s.

for ten or fifteen minutes, then drain and dry without washing. When the film is quite dry, the salt which has crystallized out on the surface should be brushed off, and the film thoroughly polished with a soft clean pad. Coat the film with enamel collodion and allow to thoroughly dry, then cut round the edges with a sharp knife, lift one corner and gently pull from the glass. A somewhat similar plan was suggested about two years ago, but then carbonate of soda was suggested. The action is dependent on the crystallization of the salt between the film and the glass.

* * *

Distilled Water.—Although not absolutely necessary for all solutions of photographic chemicals, there are some for which distilled, or cold boiled water, should be used when possible. It is always advisable to dissolve the following in distilled water: Copper sulphate, ferrous sulphate, gold chloride, mercuric bichloride. potassium permanganate, silver nitrate, uranium nitrate.

* * *

Mending Vulcanite Dishes.—Vulcanite dishes are very light, cheap and handy, but as a rule they very soon crack. To mend them, take a hot darning needle, and bore a few holes near the edges of the broken part, and fasten together by means of fine wire. Then melt some resin and beeswax in a spoon, and pour over the crack. It will at first run through, but some will quickly set and form a very good joint. Broken dishes thus prepared will last a long time.

* * *

Dusting Plates.—It is always advisable to remove dust from the surface of the plate before commencing development. Plates exposed in hand cameras are particularly liable to have fine dust upon them. A method that can be recommended in preference to the customary brushing is to tap the edge of the plate gently on the workroom bench before commencing development. An alternative method is to place the edge of the plate on the bench, and whilst firmly holding it vertical, tap the glass side with one's fingers. By this means all risk of friction marks is avoided, and these are liable to occur if a duster or brush is used and a gritty substance is on the plate.

Newspaper Markings on Plates.—It is a very dangerous thing to wrap exposed or unexposed plates in newspapers. Authorities have been telling us so for years, and yet amatours will do it, the result being that the imprint of the letterpress shows up very badly when the plate is developed. It has been said that it is impossible to remove these markings, but I have been told of a method which I believe is new. I purposely wrapped some plates film side outwards, and secured some lovely markings, for the purpose of trying the process, and it acted splendidly. If the imprint can be seen before development—and it is generally possible—the impression can be entirely removed by bathing the plates, before developing, in a very weak solution of acetic acid—a 2 per cent. solution is strong enough—then well wash with water, and place in a bath of methylated spirit. Then dry if necessary, or develop as usual.

* * *

Calcium Chloride.—The calcium chloride used in connection with storing platinum paper, as an absorbent to prevent damp injuring the paper, can be used over again if it should become damp. This is indicated by the calcium becoming soft, but by heating it over the fire it will be dried, and may again be placed in the tin or special calcium tube.

* * *

Soaking versus Running Water.—Instructions as to washing generally say "running water," and amateurs often construe this to mean a stream of water rushing violently into the dish and running noisily out again. But it does not follow that prints or negatives are thoroughly washed under these conditions. If, as is often the case, a large bowl be used, the prints will sink to the bottom, and the running water will simply run in and out at the top, leaving the lower portions charged with hypo. Unless the dish is frequently emptied, or has a hole in the bottom to let hypo-laden water out, the washing will not be well done. But apart from this there is a risk of damage to prints and negatives—frilling, for instance—when water is splashing violently into the washing dish. It should be borne in mind that soaking in frequent changes of water is quite as effective as washing in running water, although it may seem more troublesome. Of course, in both cases, where a large batch of prints are being washed, they should be constantly turned about, and this will be found a more agreeable operation when the prints are allowed to soak; unless the running water is admitted below the water level in the dish.

* * * *

Under-exposed Carbon Prints.—The beginner in carbon is liable to under-expose his tissue, and may be dismayed to find the gelatine dissolve so rapidly as to ruin the print. If this becomes evident, the print should be taken from the hot bath and soaked for a few minutes in cold water. Development may then be resumed in a bath of considerably lower temperature than the normal one required for correctly exposed tissue. If prompt measures are taken, a print may often be saved in this way.

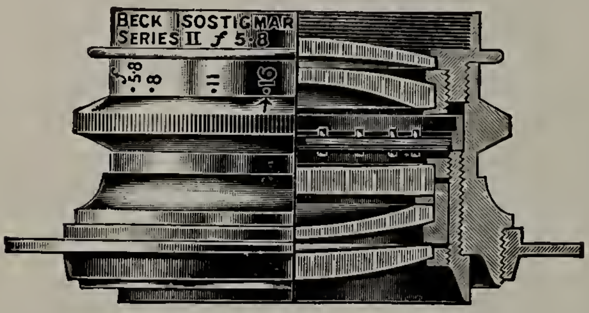
* * *

Dark Slides that Want Easing.—The poet who adorns the pages of *Photography* from time to time recently described a home-made dark slide, whose shutters defied the power of their maker to draw them out. The fault is not one that is limited to the home-made article; and many well-finished slides in other respect have shutters that work very stiffly. A little stiffness in some parts of the apparatus does no harm, but in the shutter of the slide it is a nuisance. It may lead to the camera being moved, so that the whole work or arranging and focusing has to be done *de novo,* while it absolutely precludes the satisfactory testing of an exposure by pushing in the shutter a little at a time. If the shutter is only roughly finished it can be made to work more smoothly by rubbing its edges slightly with fine glass paper, but one has to be very careful not to overdo it. This should not be attempted with a well-finished shutter, as it is no doubt an excellent fit already, and merely wants a little lubricant. French chalk may be used, but the blacklead is much better, and is more conveniently applied. We can sharpen a soft pencil, and rub its point along the grooves in which the shutter runs and along its edges, and so apply the graphite exactly where it is needed and nowhere else. If we then draw the shutter in and out a few times it will be found to work smoothly and easily.

Trade Notes

The Isostigmar.—A recent discovery in Anastigmat Lenses, manufactured by Messrs. R. & J. Beck.. By Morris Earle.

One might have supposed that the ground had been so thoroughly ploughed up in the optical field that no original idea could be brought to the surface as distinctly new as the formula that the Messrs. R. & J. Beck, the old renowned manufacturers of high grade optical instruments, have evolved in their new Anastigmat lens known as the "Isostigmar."



Formerly, it was the case that all manufacturers of lenses, known under the type of Anastigmats, conformed to a theory known known as the "Petzval Condition," which on acount of the deep concavity of the individual lenses required the making of these lenses one at a time and that these lenses should be cemented together; whereas the Isostigmars, having shallow concavities, are ground many at a time and are not cemented together. This, it is evident, results in reducing the cost of manufacture and places this new lens in the hands of many photographers who thus far have been unable to possess a highgrade lens. Messrs. Beck have, under this new formula, manufactured a lens which has very unusual qualities; first, that it is a high grade lens, and, second, that it is manufactured at a very low price, less than half the price of the regular Anastigmat lenses. The careful tests that have been made on this lens at the National Physical Laboratory of Teddington, London, show first, that notwithstanding the fact that there are ten glass-air surfaces, there is no flare spot, second, that there is no visible defect, such as striæ, veins. etc., and that notwithstanding the fact that the lenses are not cemented together the relative centering of the surfaces is entirely satisfactory. Further examination shows that the definition at the center of the plate with largest stop was excellent and that this definition was satisfactory over the entire plate with the full opening marked f.5.8.

The general description in the Messrs. Beck's recent patent gives a sufficiently correct idea of the various properties of the lens, namely, that "it is a compound photographic lens spherically, chromatically, and astigmatically corrected, consisting of two positive and three negative lenses all separated by air spaces, two of which air spaces are of the shape of a positive lens, and two of which are of the shape of a negative lens, the two more powerful of the three negative lenses being meniscus-shaped, and being made of a glass with greater dispersive power than that used in the positive lenses, the two positive lenses being either meniscus, plain convex, or double convex, the curvature of the surfaces facing the negative lenses in the last case being very slight."

There are two series thus far put upon the market but Messrs. Beck promise others very shortly and are preparing portrait combinations, wide angle lenses, in fact, a full series of new productions in the lens field for photographic use, following the general formula as set forth in their patent papers. The series II. lens has an opening of f5.8 and the particular lens, No. 3, focus 4½ inches, described by the National Physical Laboratory, is furnished in a brass tube with Iris Diaphragm. These lenses are so carefully manufactured that they can be screwed immediately into many of the most popular cameras now on the market and they can be used at once without any special fitting. For this purpose this lens is furnished in cells in a velvet lined morocco case. For a very moderate price the photographer can avail himself of all the advantages of a high grade lens. Another very advantageous quality about the lens is that the front and back combinations can be used separately for soft portraiture effects without stopping down, and
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for landscape and other pictures, where larger images are desired, a sharp focus can be obtained by diaphragming down the lens. It will be of further interest to know that this lens can be used with its full opening to cover a much larger plate than it is listed at; a 5 x 7 plate being fully covered by this 4½ inch lens. So that it is evident that the lens can be raised or lowered on the rising and falling front of the camera without losing any marginal sharpness in the picture.

In conclusion it may be well to say that the great working aperture, f5.8, of this lens admits a large amount of light which enables the photographer to obtain instantaneous photographs in the dull days of autumn and winter under conditions impossible with the ordinary lens, and yet notwithstanding this increased advantage the sharpness of focus is in no way impaired.

These lenses are imported by Messrs. Williams, Brown & Earle, Philadelphia, Pa., Sole American Agents for Messrs. R. & J. Beck, London, who will be pleased to furnish full descriptions and prices.

* * *

ARE YOU WONDERING WHAT TO GIVE THE YOUNGSTERS FOR CHRISTMAS?—Then write the Rochester Optical Division of the Eastman Kodak Co. for a copy of the Christmas folder describing the new Premo Junior. There are a number of other good things mentioned and from among the twenty-five models are many that will appeal strongly to the "grown-ups" as well.

* * *

THE GOODWIN FILM AND CAMERA COMPANY OF BINGHAMTON, N. Y. has lost no time in reconstructing its film plant, which was totally destroyed by fire last September. It is announced that the new concrete building, which is almost finished, will be one of the most carefully planned film factories in the world.

The new plant will be ready to market Ansco films again on or about January 1st proximo, and we know that the many sellers and users of Ansco films will welcome this news and will join us in expressing admiration for the spirit of enterprise which has made possible in such a short time the building and equipping of a large plant, one requiring special machinery.

FOLMER & SCHWING have a most interesting and instructive series of Lantern Slides, which they intend loaning to Camera Clubs, Photographic Societies, Schools and other organizations interested in photography.

These slides will be ready some time in December, and Clubs desiring the use of this collection are invited to correspond with the Folmer & Schwing Division, Eastman Kodak Co., Rochester, N. Y.

* * *

AUTOTYPE SPIRIT SENSITISER—This Sensitiser will be especially appreciated by those using Carbon Tissue in comparatively small quantities or only occasionally. No special apparatus or drying room is needed, and the operation is so rapid that tissue can be printed from within a few minutes of sensitising.

Send for complete circular on Carbon Tissues to George Murphy, Inc., 57 East Ninth Street, New York.

* * *

PORTRAITS ON POSTAL CARDS FOR THE HOLIDAY TRADE.—There are so many photographers using postal cards for portrait work, especially at this time of the year in anticipation of the holiday trade, that a card coated with Professional Cyko emulsion, to produce soft prints from contrasty negatives, has been persistently urged on the manufacturers of Cyko, who announce that they are in a position to supply Professional Cyko cards of semi-matte surface, in boxes of 500 and 1,000 cards only, at $8.50 per thousand, net. The cardboard will be the same as used for the regular Cyko card, i. e., pure linen stock of standard weight and of the highest grade of texture and chemical purity.

This card is not intended for those who consider price the only factor, but for those who wish to build up a reputation for quality and who have already learned from experience that in the postal card business the item of rejected prints enters more largely into the question of profit than the cost of the card.

Cyko cards are uniform. They allow great latitude in printing and can be forced in development without staining or fogging. They produce soft and brilliant prints.

TWO SUGGESTIONS TO "THE MAN WHO SIGNS THE CHECKS"

The scarcity of money seems to be the "root of all evil" just now and ways and means of bringing out the foolishly hoarded millions are being discussed. In many cases the echoes of the talk are about the only results and little of account is actually accomplished.

The way to resume—is to resume—to do a thing something must be done and the ability of the American merchant to "get right down to brass tacks" and *do something* is in the present emergency to be relied upon.

Through the medium of "accounts payable" and "accounts receivable" much can be done by the public spirited merchants of the country to restore business conditions to their normal and prosperous state.

It must be generally admitted as a fact that a corporation or an individual cannot pay out money unless it has a large cash surplus or can collect from its debtors the moneys that are due. Collections are now slower than normal. It therefore logically follows that to resume payments of accounts due, accounts receivable must be started coming in. If that can be done it will serve as a helpful factor at the present time.

On the first of the month millions of statements will be sent throughout the length and breadth of this great and glorious America of which we are so proud and in whose fundamental strength we have such confidence—though all of us are not showing it just now. Many of these statements will carry antagonistic rubber stamp paragraphs reading "Please Remit," "Long Overdue" and other far from effective requests to pay up.

If instead every monthly statement that goes out wereto bear the following patriotic appeal in big display type and red ink, the Americanism in the breast of the "man who signs the checks" would prompt him to join in the movement of that endless chain of payments justly due and the consequent good morning mails would result in a batch of checks of equal amount going out in the afternoon from establishments generally.

This or something similar should be on every statement mailed to a debtor and on all outgoing invoices as well.

TO "THE MAN WHO SIGNS THE CHECKS."

The spirit of patriotic financial co-operation should govern us all at this time—and the most practical method is for us to pay each other the bills we owe.

We are doing what we can in that direction: Will you help us? We'll promise to start your remittance on its way immediately upon receipt, to do its full share in restoring confidence and prosperity for us all.

"THE WAY TO RESUME IS — TO RESUME."

Here is the second suggestion: The man who has money is a power—to-day as never before. When he pays a bill let him now do it as effectively for the general good as possible and instead of enclosing the check in a a curt note, reading "Enclosed find check"—or possibly with no note at all—he should see that with each check is sent a form letter or a printed slip reading somewhat as follows:

> **In sending you the enclosed check for our account we do so in the hope that you will immediately comtinue it on its way to do its full share in restoring confidence and prosperity for us all.**
>
> **The spirit of patriotic co-operation should govern us all at this time — and the most practical method is for us to pay each other the bills we owe**
>
> **American merchants and manufacturers have never been found wanting in a patriotic emergency. Put your shoulder to the wheel with the rest of us—NOW.**
>
> **Yours for Continued Prosperity**
> **(Signature.)**

The suggestion here made may perhaps be elaborated upon, but if generally adopted they will improve that "morning mail"—that index of improving conditions that every "man who signs the checks" is just now watching with even more careful scrutiny than he scans the weekly bank statement.

I urge you all—manufacturers and merchants—to act upon this suggestion. First of the month statements and all outgoing checks can thereby be made the advance agents of a returned prosperity.—Roger W. Allen in *The American Hatter.*